
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=6; day=11; hr=12; min=39; sec=16; ms=741;]

Validated By CRFValidator v 1.0.3

Application No: 10586071 Version No: 1.0

Input Set:

Output Set:

Started: 2009-06-04 13:19:44.436

Finished: 2009-06-04 13:19:47.221

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 785 ms

Total Warnings: 57

Total Errors: 0

No. of SeqIDs Defined: 67

Actual SeqID Count: 67

Error code		Error Descript	ion								
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(1)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(2)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(3)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(4)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(5)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(6)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(7)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(8)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(9)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(20)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(21)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(22)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(23)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(24)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(25)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(26)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(27)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(28)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(29)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(30)

Input Set:

Output Set:

Started: 2009-06-04 13:19:44.436

Finished: 2009-06-04 13:19:47.221

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 785 ms

Total Warnings: 57

Total Errors: 0

No. of SeqIDs Defined: 67

Actual SeqID Count: 67

Error code Error Description

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

<110>	Novartis Research Foundation	
<120>	Diagnostic and treatment of a mental disorder	
<130>	4-33588A	
<140>	10586071	
	2009-06-04	
<160>	67	
<170>	PatentIn version 3.2	
<210>	1	
	25	
<212>		
<213>	Artificial	
<220>		
<223>	Primer/Probe	
<400>	1	
cacage	gagg agcttcatga ttgta	25
<210>	2	
<211>		
<212>		
<213>	Artificial	
<220>		
<223>	Primer/Probe	
<400>	2	
tgatggt	tgct ggaaag	16
<210>	3	
<211>	20	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Primer/Probe	
<400>	3	
ctgcctt	tcct ggagcaaact	20
<210>	4	
<211>	22	
<211>		
	DNA	
<213>	Artificial	

```
<223> Primer/Probe
<400> 4
cgagcggtaa agtcatcctg tt
                                                                    22
<210> 5
<211> 20
<212> DNA
<213> Artificial
<220>
<223> Primer/Probe
<400> 5
                                                                    20
tcttggcgtt gtggtgatgc
<210> 6
<211> 18
<212> DNA
<213> Artificial
<220>
<223> Primer/Probe
<400> 6
                                                                    18
cccgtgcaac cagtttgg
<210> 7
<211> 24
<212> DNA
<213> Artificial
<220>
<223> Primer/Probe
<400> 7
                                                                    24
gacgtacttg agggaattct gaat
<210> 8
<211> 25
<212> DNA
<213> Artificial
<220>
<223> Primer/Probe
<400> 8
cagctgccct tcctggacag cctat
                                                                    25
<210> 9
<211> 25
```

<212> DNA

```
<213> Artificial
<220>
<223> Primer/Probe
<400> 9
tatgctggct ggttttacct caact
<210> 10
<211> 274
<212> PRT
<213> Homo sapiens
<400> 10
Met Gly Thr Asp Ser Arg Ala Ala Lys Ala Leu Leu Ala Arg Ala Arg
1 5 10 15
Thr Leu His Leu Gln Thr Gly Asn Leu Leu Asn Trp Gly Arg Leu Arg
              25
       20
Lys Lys Cys Pro Ser Thr His Ser Glu Glu Leu His Asp Cys Ile Gln
   35 40 45
Lys Thr Leu Asn Glu Trp Ser Ser Gln Ile Asn Pro Asp Leu Val Arg
     55
Glu Phe Pro Asp Val Leu Glu Cys Thr Val Ser His Ala Val Glu Lys
65 70 75
Ile Asn Pro Asp Glu Arg Glu Glu Met Lys Val Ser Ala Lys Leu Phe
               90
        85
Ile Val Glu Ser Asn Ser Ser Ser Ser Thr Arg Ser Ala Val Asp Met
       100
                105
                                    110
Ala Cys Ser Val Leu Gly Val Ala Gln Leu Asp Ser Val Ile Ile Ala
    115 120 125
Ser Pro Pro Ile Glu Asp Gly Val Asn Leu Ser Leu Glu His Leu Gln
 130 135
                              140
Pro Tyr Trp Glu Glu Leu Glu Asn Leu Val Gln Ser Lys Lys Ile Val
145 150 155 160
```

Ala Ile Gly Thr Ser Asp Leu Asp Lys Thr Gln Leu Glu Gln Leu Tyr

25

165 170 175

Gln Trp Ala Gln Val Lys Pro Asn Ser Asn Gln Val Asn Leu Ala Ser 180 185 190

Cys Cys Val Met Pro Pro Asp Leu Thr Ala Phe Ala Lys Gln Phe Asp 195 200 205

Ile Gln Leu Leu Thr His Asn Asp Pro Lys Glu Leu Leu Ser Glu Ala 210 215 220

Ser Phe Gln Glu Ala Leu Gln Glu Ser Ile Pro Asp Ile Gln Ala His 225 230 235 240

Glu Trp Val Pro Leu Trp Leu Leu Arg Tyr Ser Val Ile Val Lys Ser 245 250 255

Arg Gly Ile Ile Lys Ser Lys Gly Tyr Ile Leu Gln Ala Lys Arg Arg 260 265 270

Gly Ser

<210> 11

<211> 474

<212> PRT

<213> Homo sapiens

<400> 11

Met Ala Thr Asn Trp Gly Ser Leu Leu Gln Asp Lys Gln Gln Leu Glu

1 10 15

Glu Leu Ala Arg Gln Ala Val Asp Arg Ala Leu Ala Glu Gly Val Leu $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$

Leu Arg Thr Ser Gln Glu Pro Thr Ser Ser Glu Val Val Ser Tyr Ala 35 40 45

Pro Phe Thr Leu Phe Pro Ser Leu Val Pro Ser Ala Leu Leu Glu Gln 50 55 60

Ala Tyr Ala Val Gln Met Asp Phe Asn Leu Leu Val Asp Ala Val Ser 65 70 75 80

Gln	Asn	Ala	Ala	Phe 85	Leu	Glu	Gln	Thr	Leu 90	Ser	Ser	Thr	Ile	Lys 95	Gln
Asp	Asp	Phe	Thr 100	Ala	Arg	Leu	Phe	Asp 105	Ile	His	Lys	Gln	Val 110	Leu	Lys
Glu	Gly	Ile 115	Ala	Gln	Thr	Val	Phe 120	Leu	Gly	Leu	Asn	Arg 125	Ser	Asp	Tyr
Met	Phe 130	Gln	Arg	Ser	Ala	Asp 135	Gly	Ser	Pro	Ala	Leu 140	Lys	Gln	Ile	Glu
Ile 145	Asn	Thr	Ile	Ser	Ala 150	Ser	Phe	Gly	Gly	Leu 155	Ala	Ser	Arg	Thr	Pro 160
Ala	Val	His	Arg	His 165	Val	Leu	Ser	Val	Leu 170	Ser	Lys	Thr	Lys	Glu 175	Ala
Gly	Lys	Ile	Leu 180	Ser	Asn	Asn	Pro	Ser 185	Lys	Gly	Leu	Ala	Leu 190	Gly	Ile
Ala	Lys	Ala 195	Trp	Glu	Leu	Tyr	Gly 200	Ser	Pro	Asn	Ala	Leu 205	Val	Leu	Leu
Ile	Ala 210	Gln	Glu	Lys	Glu	Arg 215	Asn	Ile	Phe	Asp	Gln 220	Arg	Ala	Ile	Glu
Asn 225	Glu	Leu	Leu	Ala	Arg 230	Asn	Ile	His	Val	Ile 235	Arg	Arg	Thr	Phe	Glu 240
Asp	Ile	Ser	Glu	Lys 245	Gly	Ser	Leu	Asp	Gln 250	Asp	Arg	Arg	Leu	Phe 255	Val
Asp	Gly	Gln	Glu 260	Ile	Ala	Val	Val	Tyr 265	Phe	Arg	Asp	Gly	Tyr 270	Met	Pro
Arg	Gln	Tyr 275	Ser	Leu	Gln	Asn	Trp 280	Glu	Ala	Arg	Leu	Leu 285	Leu	Glu	Arg
Ser	His 290	Ala	Ala	Lys	Суз	Pro 295	Asp	Ile	Ala	Thr	Gln 300	Leu	Ala	Gly	Thr

Lys Lys Val Gln Gln Glu Leu Ser Arg Pro Gly Met Leu Glu Met Leu 305 310 315 320 Leu Pro Gly Gln Pro Glu Ala Val Ala Arg Leu Arg Ala Thr Phe Ala 325 330 335 Gly Leu Tyr Ser Leu Asp Val Gly Glu Glu Gly Asp Gln Ala Ile Ala 340 345 350 Glu Ala Leu Ala Ala Pro Ser Arg Phe Val Leu Lys Pro Gln Arg Glu 355 360 Gly Gly Gly Asn Asn Leu Tyr Gly Glu Glu Met Val Gln Ala Leu Lys 370 375 380 Gln Leu Lys Asp Ser Glu Glu Arg Ala Ser Tyr Ile Leu Met Glu Lys 390 395 385 Ile Glu Pro Glu Pro Phe Glu Asn Cys Leu Leu Arg Pro Gly Ser Pro 405 410 415 Ala Arg Val Val Gln Cys Ile Ser Glu Leu Gly Ile Phe Gly Val Tyr 420 425 430 Val Arg Gln Glu Lys Thr Leu Val Met Asn Lys His Val Gly His Leu 435 440 445 Leu Arg Thr Lys Ala Ile Glu His Ala Asp Gly Gly Val Ala Ala Gly 450 455 460 Val Ala Val Leu Asp Asn Pro Tyr Pro Val 465 470 <210> 12 <211> 201 <212> PRT <213> Homo sapiens <220> <221> misc_feature <222> (47)..(47)

<223> Xaa can be any naturally occurring amino acid

<400> 12

Met Cys Ala Ala Arg Leu Ala Ala Ala Ala Gln Ser Val Tyr Ala 1 5 10 15 Phe Ser Ala Arg Pro Leu Ala Gly Glu Pro Val Ser Leu Gly Ser 20 25 30 Leu Arg Gly Lys Val Leu Leu Ile Glu Asn Val Ala Ser Leu Xaa Gly 35 40 45 Thr Thr Val Arg Asp Tyr Thr Gln Met Asn Glu Leu Gln Arg Arg Leu 55 60 Gly Pro Arg Gly Leu Val Val Leu Gly Phe Pro Cys Asn Gln Phe Gly
 65
 70
 75
 80
 His Gln Glu Asn Ala Lys Asn Glu Glu Ile Leu Asn Ser Leu Lys Tyr 85 90 95 Val Arg Pro Gly Gly Gly Phe Glu Pro Asn Phe Met Leu Phe Glu Lys 100 105 110 Cys Glu Val Asn Gly Ala Gly Ala His Pro Leu Phe Ala Phe Leu Arg 115 120 125 Glu Ala Leu Pro Ala Pro Ser Asp Asp Ala Thr Ala Leu Met Thr Asp 130 135 140 Pro Lys Leu Ile Thr Trp Ser Pro Val Cys Arg Asn Asp Val Ala Trp 145 150 155 160 Asn Phe Glu Lys Phe Leu Val Gly Pro Asp Gly Val Pro Leu Arg Arg 165 170 175 Tyr Ser Arg Arg Phe Gln Thr Ile Asp Ile Glu Pro Asp Ile Glu Ala 180 185 190 Leu Leu Ser Gln Gly Pro Ser Cys Ala 195 200

<210> 13 <211> 501 <212> PRT

<213> Homo sapiens

Met 1	Val	Arg	Lys	Pro 5	Val	Val	Ser	Thr	Ile 10	Ser	Lys	Gly	Gly	Tyr 15	Leu
Gln	Gly	Asn	Val	Asn	Gly	Arg	Leu	Pro	Ser	Leu	Gly	Asn	Lys	Glu	Pro

Gin Giy Asn Vai Asn Giy Arg Leu Pro Ser Leu Giy Asn Lys Giu Pro 20 25 30

Pro Gly Gln Glu Lys Val Gln Leu Lys Arg Lys Val Thr Leu Leu Arg 35 40 45

Gly Val Ser Ile Ile Ile Gly Thr Ile Ile Gly Ala Gly Ile Phe Ile 50 55 60

Ser Pro Lys Gly Val Leu Gln Asn Thr Gly Ser Val Gly Met Ser Leu 65 70 75 80

Thr Ile Trp Thr Val Cys Gly Val Leu Ser Leu Phe Gly Ala Leu Ser 85 90 95

Tyr Ala Glu Leu Gly Thr Thr Ile Lys Lys Ser Gly Gly His Tyr Thr 100 105 110

Tyr Ile Leu Glu Val Phe Gly Pro Leu Pro Ala Phe Val Arg Val Trp
115 120 125

Val Glu Leu Leu Ile Ile Arg Pro Ala Ala Thr Ala Val Ile Ser Leu 130 135 140

Pro Glu Leu Ala Ile Lys Leu Ile Thr Ala Val Gly Ile Thr Val Val \$165\$ \$170\$ \$175\$

Met Val Leu Asn Ser Met Ser Val Ser Trp Ser Ala Arg Ile Gln Ile 180 185 190

Phe Leu Thr Phe Cys Lys Leu Thr Ala Ile Leu Ile Ile Ile Val Pro 195 200 205

Gly Val Met Gln Leu Ile Lys Gly Gln Thr Gln Asn Phe Lys Asp Ala 210 215 220

Phe 225	Ser	Gly	Arg	Asp	Ser 230	Ser	Ile	Thr	Arg	Leu 235	Pro	Leu	Ala	Phe	Tyr 240
Tyr	Gly	Met	Tyr	Ala 245	Tyr	Ala	Gly	Trp	Phe 250	Tyr	Leu	Asn	Phe	Val 255	Thr
Glu	Glu	Val	Glu 260	Asn	Pro	Glu	Lys	Thr 265	Ile	Pro	Leu	Ala	Ile 270	Cys	Ile
Ser	Met	Ala 275	Ile	Val	Thr	Ile	Gly 280	Tyr	Val	Leu	Thr	Asn 285	Val	Ala	Tyr
Phe	Thr 290	Thr	Ile	Asn	Ala	Glu 295	Glu	Leu	Leu	Leu	Ser 300	Asn	Ala	Val	Ala
Val 305	Thr	Phe	Ser	Glu	Arg 310	Leu	Leu	Gly	Asn	Phe 315	Ser	Leu	Ala	Val	Pro 320
Ile	Phe	Val	Ala	Leu 325	Ser	Суз	Phe	Gly	Ser 330	Met	Asn	Gly	Gly	Val 335	Phe
Ala	Val	Ser	Arg 340	Leu	Phe	Tyr	Val	Ala 345	Ser	Arg	Glu	Gly	His 350	Leu	Pro
Glu	Ile	Leu 355	Ser	Met	Ile	His	Val 360	Arg	Lys	His	Thr	Pro 365	Leu	Pro	Ala
Val	Ile 370	Val	Leu	His	Pro	Leu 375	Thr	Met	Ile	Met	Leu 380	Phe	Ser	Gly	Asp
Leu 385	Asp	Ser	Leu	Leu	Asn 390	Phe	Leu	Ser	Phe	Ala 395	Arg	Trp	Leu	Phe	Ile 400
Gly	Leu	Ala	Val	Ala 405	Gly	Leu	Ile	Tyr	Leu 410	Arg	Tyr	Lys	Суз	Pro 415	Asp
Met	His	Arg	Pro 420	Phe	Lys	Val	Pro	Leu 425	Phe	Ile	Pro	Ala	Leu 430	Phe	Ser
Phe	Thr	Cys 435	Leu	Phe	Met	Val	Ala 440	Leu	Ser	Leu	Tyr	Ser 445	Asp	Pro	Phe

Ser Thr Gly Ile Gly Phe Val Ile Thr Leu Thr Gly Val Pro Ala Tyr 450 455 460

Tyr Leu Phe Ile Ile Trp Asp Lys Lys Pro Arg Trp Phe Arg Ile Met 465 470 475 480

Ser Glu Lys Ile Thr Arg Thr Leu Gln Ile Ile Leu Glu Val Val Pro 485 490 495

Glu Glu Asp Lys Leu 500

<210> 14

<211> 1610

<212> DNA

<213> Homo sapiens

<400> 14

ggcacgaggc tgcggccgca gtagccggag ccggagccgc agccaccggt gccttccttt 60 cccgccgccg cccagccgcc gtccggcctc cctcgggccc gagcgcagac caggctccag 120 cegegegeg ceggeagect egegetecet etegggtete tetegggeet egggeacege 180 gtectgtggg eggeegeetg eetgeeegee egeeegeage eeettgeetg eeggeeeetg 240 qqcqqcccqt qccatqqqca ccqacaqccq cqcqqccaaq qcqctcctqq cqcqqqcccq 300 caccetgeac etgeagaegg ggaacetget gaactgggge egeetgegga agaagtgeee 360 qtccacqcac aqcqaqqaqc ttcatqattq tatccaaaaa accttqaatq aatqqaqttc 420 ccaaatcaac ccagatttgg tcagggagtt tccagatgtc ttggaatgca ctgtatctca 480 tgcagtagaa aagataaatc ctgatgaaag agaagaaatg aaagtttctg caaaactgtt 540 cattgtagaa tcaaactctt catcatcaac tagaagtgca gttgacatgg cctgttcagt ccttggagtt gcacagctgg attctgtgat cattgcttca cctcctattg aagatggagt 660 taatctttcc ttggagcatt tacagcctta ctgggaggaa ttagaaaact tagttcagag 720 caaaaagatt gttgccatag gtacctctga tctagacaaa acacagttgg aacagctgta 780 tcagtgggca caggtaaaac caaatagtaa ccaagttaat cttgcctcct gctgtgtgat 840 qccaccagat ttgactgcat ttgctaaaca atttgacata cagctgttga ctcacaatga tccaaaagaa ctgctttctg aagcaagttt ccaagaagct cttcaggaaa gcattcctga 960 cattcaagcg cacgagtggg tgccgctgtg gctactgcgg tattcggtca ttgtgaaaag 1020 1080 tagaggaatt atcaaatcaa aaggctacat tttacaagct aaaagaaggg gttcttaact

gacttaggag	cataacttac	ctgtaatttc	cttcaatatg	agagaaaatt	gagatgtgta	1140
aaatctagtt	actgcctgta	aatggtgtca	ttgaggcaga	tattctttcg	tcatatttga	1200
cagtatgttg	tctgtcaagt	tttaaatact	tatcttgcct	ccatatcaat	ccattctcat	1260
gaacctctgt	attgctttcc	ttaaactatt	gttttctaat	tgaaattgtc	tataaagaaa	1320
atacttgcaa	tatattttc	ctttattttt	atgactaata	taaatcaaga	aaatttgttg	1380
ttagatatat	tttggcctag	gtatcagggt	aatgtatata	catattttt	atttccaaaa	1440
aaaattcatt	aattgcttct	taactcttat	tataaccaag	caatttaatt	acaattgtta	1500
aaactgaaat	actggaagaa	gatattttc	ctgtcattga	tgagatatat	cagagtaact	1560
ggagtagctg	ggatttacta	gtagtgtaaa	taaaattcac	tcttcaatac		1610

<210> 15

<211> 1918

<212> DNA

<213> Homo sapiens

<400> 15

gaggeeeege eeeetgagee tgggtagegg egegagggee gggagaaeeg ttegeggagg 60 aaaggcgaac tagtgttggg atggccacca actgggggag cctcttgcag gataaacagc 120 agctagagga gctggcacgg caggccgtgg accgggccct ggctgaggga gtattgctga 180 240 ggacctcaca ggagcccact tcctcggagg tggtgagcta tgccccattc acgctcttcc cctcactggt ccccagtgcc ctgctggagc aagcctatgc tgtgcagatg gacttcaacc 300 tgctagtgga tgctgtcagc cagaacgctg ccttcctgga gcaaactctt tccagcacca 360 tcaaacagga tgactttacc gctcgtctct ttgacatcca caagcaagtc ctaaaagagg 420 480 cagatggete eccageeetg aaacagateg aaateaacae eatetetgee agetttgggg 540 gcctggcctc ccggacccca gctgtgcacc gacatgttct cagtgtcctg agtaagacca 600 aagaagctgg caagatcctc tctaataatc ccagcaaggg actggccctg ggaattgcca 660 aagcctggga getetaegge teacecaatg etetggtget aetgattget eaagagaagg 720 aaagaaacat atttgaccag